

## **Appendix A – Options for Significance Standard**

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This Appendix discusses six options that can be pursued when contemplating the issue of SEPA standard significance thresholds for greenhouse gas emissions. This Appendix explores each option and discusses the advantages and disadvantages of each.

### **I. DEGREE OF REQUIREMENT**

- Set in rule, required to be used for determining significance (and possibly used for determining mitigation)
- Presented in guidance, directing agencies to use it for determining significance, but with no “teeth” nor directive for agencies to adopt it.

### **II. STATEWIDE STANDARD**

#### **A. Zero Significance Threshold**

##### ***Description:***

This approach sets the GHG emission threshold at zero tons/year. Under this approach any increase in emissions would be significant.

- Projects that result in a reduction of GHG emissions compared to baseline emissions would be less than significant. Projects that result in a net increase of GHG emissions would be required to mitigate their emissions to zero or exceed the threshold.
- This threshold approach is based on the belief that 1) all GHG emissions contribute to global climate change and could be considered significant, and 2) not controlling emissions from smaller sources would be neglecting a major portion of the GHG inventory.

Project: Steps: 1) inventory of GHG emissions generated by project, 2) inventory of energy needs of project, and 3) provide onsite and offsite mitigation to reduce GHG emissions to net zero or exceed the threshold.

Non-Project: Steps: 1) provide an inventory of GHG emissions generated within the planning area, 2) provide an inventory of energy needs of the planning area, and 3) develop a GHG Reduction Plan for the planning area that implements the GHG Emission Reduction to zero or exceed the threshold.

##### ***Advantages:***

- Addresses the cumulative impact of many small GHG sources. While individually

many GHG sources are too small to make any noticeable difference to climate change, it is also true that the countless small sources around the globe combine to produce a very substantial portion of total GHG emissions.

- Under this option, all projects subject to SEPA would be required to quantify and mitigate their GHG emissions. All would fall under the SEPA microscope.
- Potentially greater degree of certainty for project proponents
- Possible to establish GHG Best Practices for smaller projects to achieve compliance without forcing extensive analysis for them

***Disadvantages:***

- Increased administrative costs and pressure on environmental review system capacity given that some projects that previously would have qualified for an exemption could require substantial analysis.
- May be that the increased volume of projects requiring review reduces the quality of consideration given to review worst projects
- Should consider whether meaningful mitigation can be achieved from smaller projects

*Questions: Does establishing a significance threshold of zero affect the use of categorical exemptions?*

*Possible strategies: If regulatory approach is pursued, 197-11 could provide caveats (exceptions) for exemptions. These caveats or exceptions could mention BMPs for climate impacts as a means to remain exempt or could require analysis and limit it to climate change. If the procedural approach is pursued, agencies could create their own exceptions to the exemptions as with critical areas (197-11-908).*

**B. Non-zero Significance Threshold**

**1. Option 1: Set x tons/unit threshold or x tons/year threshold**

***Description:*** Set a bright line numerical threshold approach

**Project:** If the threshold was set at xx tons per year then each project that exceeds that threshold would be considered to have a significant impact (e.g., residential development threshold = 900 tpy, an industrial project could not exceed 25,000 tpy). A project could then use mitigation to bring itself below the threshold.

Steps are: 1) inventory of GHG emissions generated by project, 2) inventory of energy needs of project, and 3) if above XX tpy threshold then provide onsite and offsite mitigation to reduce GHG emissions to below threshold.

Nonproject: 1) provide an inventory of GHG emissions generated within the planning area, 2) provide an inventory of energy needs of the planning area, and 3) develop a GHG Reduction Plan for the planning area that implements the GHG Emission Reduction to below the numerical threshold or adopt feasible reduction measures to reach GHG reduction target and come below numerical threshold.

### ***Advantages***

- Excludes small projects that have a relatively small contribution to state GHG inventory
- Single threshold easier to apply to projects and more easily understood by the public, applicants and lead agencies.

### ***Disadvantages***

- If set too low may discourage mitigation and if set too high may not capture enough projects to meet state requirements of GHG reduction targets
- Larger projects shoulder greater burden of reductions to compensate for smaller projects not requiring mitigation, in order to reach reduction targets statewide.

## **2. Option 2: Meeting WA State GHG Reduction Requirements**

### ***Description:***

In 2008, the Washington State Legislature set requirements for reducing statewide GHG emissions to 50 % below 1990 levels by 2050. RCW 70.235.020(1)(a). RCW 70.235.020(1)(b) specifically authorizes actions to achieve these reductions under existing statutory authority, which would include SEPA. Since one of the SEPA considerations for when an EIS is required is whether an action is inconsistent with state law, the adoption of limits is significant for SEPA review.

Reducing GHG emission levels 50 % below 1990 levels would require a certain percent reduction of business-as-usual GHG emissions. In this context, business-as-usual means the emissions that would have occurred in the absence of the mandated reductions.

This threshold option would require a project/nonproject to show a percent reduction target in order to be considered less than significant.

Project: This threshold approach would require a project to meet a percent reduction target based on the average reductions needed from the business-as-usual emission from all GHG sources. Using the 2020 target, this approach would require all discretionary projects to achieve a XX percent reduction from projected business-as-usual emissions in order to be considered less than significant. A more restrictive approach would use the 2050 targets.

Nonproject: For the nonproject, this approach would follow the San Bernardino example. Local jurisdiction determines 1990 emissions, its current emissions, and its projected emissions. It then calculates the necessary reductions/net emissions to meet 50% below 1990 target requirements. Any proposal that does not meet the reduction (net emissions) state levels, would be considered to have significant impacts on climate, and all the climate change associated indirect effects.

### **3. Option 3: Uniform Based Percentage Reduction**

#### ***Description:***

State would adopt a percentage reduction below business as usual necessary to reach set level overall as end strategy (could be part of achieving the state GHG reduction requirements or another number based on science).

For a Project Action: A project would be required to meet a percent reduction target based on the average reductions needed from the business-as-usual emission from all GHG sources to be considered less than significant. (E.g., the threshold could be 15 tpy per residential unit (25% below BAU) and 50 tpy per 1000 sq. ft. retail (25% below BAU)).

For a Non-Project Action: Including in Comprehensive planning documents measures necessary to reach percentage reduction in GHG. Such measures could include mitigation in the area of energy efficiency and conservation, recycling and waste management, transportation, water, and land use and design.

#### ***Advantages of Options 2-3 Percentage Based Approach:***

- Using a percentage/time based requirement as the basis for a significance threshold may be more appropriate to address the long term adverse impacts associated with climate change
- If this goal is connected to the statewide requirements then it presents more likelihood of actually achieving statewide requirements.

#### ***Disadvantages of Options 2-3 Percentage Based Approach:***

- Difficult to allow for changes in the baseline and future emission inventories estimates
- Projecting future inventories over the next 15 to 50 years involves uncertainty.

#### 4. Option 4: Standard Threshold By Type of Project

##### Approach 1: Quantitative Threshold Based on Market Capture

##### Project

- a. Residential: Review data from at least 20 diverse cities and counties on pending applications for development. Determine the unit threshold that would capture approximately 90 percent of the residential units in the pending application lists. (E.g., in CA based on data of 90%, thresholds selected would be 50 residential units. GHG emissions associated with 50 single-family residential units is 900 metric tons/yr. So single threshold is 900 metric tons for residential projects.)
- b. Office: Similar approach for residential with threshold being 30,000 square feet. So single threshold of 900 metric tons.
- c. Industrial: Less amenable to a unit-based approach given diversity of projects within sector. Option would be to adopt a quantitative GHG emissions threshold for industrial projects equivalent to that for the residential/commercial thresholds.

Nonproject: Option would be to adopt a quantitative GHG emissions threshold for nonprojects equivalent to that for the residential/commercial thresholds.

##### *Advantages*

- Proposed threshold would exclude the smallest proposed developments from potentially burdensome requirements to quantify and mitigate GHG emissions
- Captures 90 percent of each market to show that cumulative reductions are being achieved
- Requires vast majority of new dev't emission sources to quantify GHG

##### *Disadvantages*

- Requires extensive information on jurisdictional applications for each economic sector.

- Data changes over time
- Necessary data and resources not likely available presently.
- Larger projects shoulder greater burden of reductions to compensate for smaller projects not requiring mitigation, in order to reach reduction targets statewide.

**Approach 2: Uniform %-Based Reduction by Economic Sector/ by Region**

***Description:***

This threshold option would use a tons/year GHG threshold specific to the economic sector associated with a project.

For Project Action: There would be specific threshold for each economic sector (residential, commercial, and industrial). E.g., For residential could set at xx tpy which would be set based on percent of projects trying to capture.

For Non-Project Action: This uniform percentage based reduction could also be applied to a geographic region for purposes of non-project action. The threshold standard could specify a percentage level for regions of the state. The areas within each region required to plan must then demonstrate that through their plans they are in compliance with the percent reduction goal.

***Advantages***

- Allows selection of the best regulatory goal for each sector taking into account available technology and costs
- Avoids over-regulating projects (i.e., requiring emissions to be controlled in excess of existing technology) or under-regulating projects (i.e., discouraging the use of available technology to control emissions in excess of regulations)

***Disadvantages***

- Requires extensive information on the emission inventories and best available control technology for each economic sector.
- More viable option in the long term but necessary data and resources not likely available presently.
- Larger projects shoulder greater burden of reductions to compensate for smaller projects not requiring mitigation, in order to reach reduction targets statewide.

**Approach 3: A flexible range based on amount of GHG emissions**

***Description:***

- e.g. choose between 500 and 5,000 MTCO<sub>2</sub>e
- e.g. choose between a number of units (5- 20 residential units)
- e.g. choose another GHG emissions reporting requirement ( 2,500 for mobile sources and 10,000 MTCO<sub>2</sub>e for stationary sources)

***Advantages***

- Could capture a certain % of development related emissions
- Could be defined to capture most emissions but exclude small projects
- Could lower burden on small developments
- Could lower burden on SEPA lead agencies

***Disadvantages***

- Requires knowledge of the type of projects and their GHG emissions that are likely to go through each SEPA lead agency
- Larger projects shoulder greater burden of reductions to compensate for smaller projects not requiring mitigation, in order to reach reduction targets statewide.
- **Approach 4: Identify certain types of projects (e.g., industrial projects, mining projects, road projects) as significant without mitigation and prescribe feasible mitigation measures based on project size and type**

**5. Option 5: Standard Threshold by Size of Project**

***Description***

Projects of a certain size would qualify as exceeding the threshold. E.g., proposed residential dev't of more than x dwelling units, proposed shopping center or business employing more than x number of people or encompassing more than x square feet of floor space, proposed hotel of more than x rooms.

The question with this approach is what is the threshold number the project must mitigate under – does it mitigate to point of reducing GHG emissions to level of project size below threshold.

***Advantages/Disadvantages***

Same advantages and disadvantages as Option 1 under the Non-Zero Threshold.

Project: e.g., If the threshold was set at 15 residential units/10,000 sq.ft commercial space, each project that exceeds that size would be considered to have a significant impact. A project could then use mitigation to bring itself below the level of 15 residential units/ 10,000 sq. ft.

## **6. Option 6: Tiered Approach/Decision Tree Approach**

### ***Description***

The goal of this approach is to maximize reduction predictability while minimizing administrative burden and costs. This would be accomplished by prescribing feasible mitigation measures and reserving the detailed review of an EIS for those projects of greater size and complexity.

This approach would “bin” projects based on established characteristics, with increasing requirements for each bin, or tier

#### **Tier 1: Less than Significant:**

Emissions associated with a project/plan are assumed to have a significant impact unless one can arrive at a less-than-significant finding by at least one of the following methodologies:

- a. For Non Project Action, Demonstrate that a Comprehensive Plan is in compliance with State’s goal or other stated standard threshold (zero-threshold, uniform % reduction threshold, etc.).
  - (E.g., CP fully document 1990 and 2020/50GHG emission inventories, where demonstrate its 2020/50 mitigated emissions are XX % less than 1990 emissions than it is considered less than significant.
- b. For Project Action, Demonstrate Project can meet standard threshold requirement with Level 1 reduction measures to comply with other legal authority (state requirements, other local policies and regs) –
  - (E.g., if threshold set at zero then project not significant impact if can show meets zero net GHG emissions, or if threshold set at Quantitative (tons/year) or Qualitative (unit based on market capture) then project not significant impact if comes below Quantitative or Qualitative threshold due to other legal authority.)

**OR**



- c. For Project Action, Demonstrate the Project is Exempt
- (E.g., for CA projects funded under its Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act and Disaster Preparedness and Flood Prevention Bond Act may be exempt)

**OR**

- d. For Project Action, Demonstrate that the project is on the “Green List”.
- The Green List would consist of a list of projects and project types that are deemed a positive contribution to state efforts to reduce GHG emissions. (Ex. A wind farm that had negligible construction emissions; Small hydroelectric at existing facilities that generate 5 mw or less; increase in bus service along an existing bus line; Dev’t of bicycle, pedestrian, or zero emission transportation infrastructure to serve existing regions; Extension of transit lines to currently developed but underserved communities; Recycled water projects that reduce energy consumption related to water supplies, etc.)

**OR**

- e. For Project Action, Demonstrate that project is consistent with local jurisdiction’s GHG Reduction Plan.
- Where a project can demonstrate it is consistent with an appropriate Comprehensive Plan’s GHG Reduction Plan (CGRP), the project can be declared less than significant. Comprehensive planning would analyze GHG emissions, significance, mitigation, etc. and develop a Greenhouse Gas Reduction Plan (GGRP). Project would start with analysis done at non-project stage and verify if the project was consistent with the plan and if appropriate non-project analysis for GHG emissions was conducted . Requires thorough GHG analysis at non-project level.

Tier 2: Exceeds Threshold but Mitigated to Less than Significant:

In Tier 2, for those projects that did not meet threshold under Tier 1 analysis, they would be required to implement a comprehensive set of Level 2 mitigation that brings them below the threshold. Quantitative and Quantified inventories would be required.

- a. If apply a zero threshold: Project results in a net increase of GHG emissions, but mitigation to zero
- b. If apply a Quantitative (tons/year) implement a comprehensive set of Level 2 mitigation that brings them below the threshold (Ex. Parking reduction beyond code, solar roofs, LEED Silver or Gold Certification, TDM meaasures, etc.)
- c. If apply a Qualitative (unit-based market capture- # of dwu, sq ft space or per capita ratio) threshold: a lower 2 threshold (the low “bar”) would se set. Above Tier 2 threshold then required to implement comprehensive set of Level 2 mitigation. Projects below Tier 2 threshold not required to quantify emissions or reductions.

*Tier 3: Significant and Unavoidable Impacts or Mitigated to Less than Significant:*

If mitigation still exceeds the Tier 2 threshold, an even more aggressive set of Level 3 mitigation measures would be required to reduce emissions below the Tier 2 threshold. In Tier 3 for those projects that did not meet threshold after Tier 2 mitigation and analysis, the project would be required to reduce net emissions using Level 1 reductions, as well as Level 2 and 3 mitigations. This tier would distinguish the larger projects from the smaller ones.

- a. Projects may remain significant and unavoidable where mitigation infeasible to reduce emissions to zero (e.g., cost to offsets infeasible for project or offsets not available)
- b. For Quantitative approach, more aggressive set of Level 3 mitigation measures would be required (could include such measures as on-site renewable energy system LEED Platinum certification, required recycled water use for irrigation, etc. that would mitigate to less than significant.)
- c. For Qualitative approach, apply Level 3 mitigation and require offsets for remainder (when feasible) in the amount of 90 percent of net emissions after application of Level 1, 2 and 3 mitigation. A variant could be to require mandatory Level 3 mitigation without quantification and offsets.

***Advantages***

- Allows flexibility by establishing multiple thresholds to cover a wide range of projects

- Tiers could be set at different levels depending on GHG emissions, size and characteristics of projects
- Could design to support WA state GHG reduction goals

***Disadvantages***

- Similar disadvantages as explained in approaches above.

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### Table 1: Option 6 Tiering Approach

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